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Characterization of Particulate Emissions from GDI Engine Combustion with Alcohol-blended Fuels

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October 18, 2012



The 18th Directions in Engine-Efficiency and Emissions Research (DEER), Dearborn, Michigan

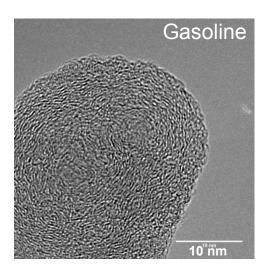
A U.S. Department of Energy laboratory managed by UChicago Argonne, LLC

Poster Location: P-19

GDI engine particulates from alcohol-blended fuels are significantly different in morphology and nanostructures

Total Particulate Concentration 1.2E+08 E10 and iB16 have 1.0F+08 the same oxygen concentration. Number/cm³ 8.0E+07 6.0E+07 4.0E+07 2.0E+07 0.0E+00 25% 50% 75% idle ■ Gasoline 3.49E+07 5.83E+07 1.60E+07 2.40E+05 ■E10 8.32E+07 7.69E+07 2.78E+07 2.54F+05 ■ib16 5.36F+07 7.19F+07 3.49F+07 6.97F+04 **■**E85 6.38E+06 8.61E+06 3.85E+06 2.92E+04

HR-TEM images



Low-degree graphite

